

To: Brown, Anthony R (RM)[anthony.brown@bp.com]
Cc: Gary Riley[Riley.Gary@epa.gov]; Hillenbrand, John[Hillenbrand.John@epa.gov]; Wetmore, Cynthia[Wetmore.Cynthia@epa.gov]; Black, Ned[Black.Ned@epa.gov]; Cale Pete[Cale.Pete@washoetribe.us]; Cory Koger[Cory.S.Koger@usace.army.mil]; Dana Barton[Barton.Dana@epa.gov]; Darrel Cruz 2[Darrel.Cruz@washoetribe.us]; David Friedman[dfriedman@ndep.nv.gov]; Doug Carey[douglas.carey@waterboards.ca.gov]; Fred K[fredk@aeseinc.com]; Greg Reller[gr@burlesonconsulting.com]; Joshua Wirschafter (Wirschafter.Joshua@epa.gov)[Wirschafter.Joshua@epa.gov]; Ken Maas[kmaas@fs.fed.us]; Lombardi, Marc (marc.lombardi@amecfw.com)[marc.lombardi@amecfw.com]; Norman Harry[Norman.Harry@washoetribe.us]; Patty Cubanski[pc@burlesonconsulting.com]; Serda, Sophia[Serda.Sophia@epa.gov]; Steve Hampton[Steve.Hampton@wildlife.ca.gov]; Thomas Maurer[thomas_maurer@fws.gov]; Toby McBride[toby_mcbride@fws.gov]
From: Deschambault, Lynda
Sent: Wed 6/14/2017 12:35:00 AM
Subject: EPA Comments on Geotechnical Work
[EPA Comments on Geotechnical_07.08.16.pdf](#)
[170209 Trans RTCs EPA 160708 Geotech TSAP_Compiled.pdf](#)
[EPA comments on Geotechnical_06.13.17final.pdf](#)

Dear Mr. Brown:

The U.S. Environmental Protection Agency (EPA) has completed its review of ARC's February 9, 2017 Responses to EPA's comments on the Focused Feasibility Study Geotechnical Evaluation Task Sampling and Analysis Plan, Leviathan Mine Site, Alpine County, California. This work was submitted to EPA pursuant to Administrative Order for Remedial Investigation and Feasibility Study, Leviathan Mine, Alpine County, California (CERCLA Docket No. 2008-18, June 23, 2008).

Please see attached comments.

Within 90 days, or by September 13, 2017; please provide the Geotechnical Technical memorandum outlining and summarizing the ARC process that ARC offered at our May 23, 2017 meeting. Providing a summary of the data that ARC believes will be sufficient to inform the Feasibility Study (FS) and the characterization needed to meet the geotechnical tasks identified in the Statement of Work for Remedial Investigation/Feasibility Study (SOW).

EPA notes that additional geotechnical investigations will likely be necessary to complete the Remedial Design (RD) (40 CFR § 300.5) and the process should be such that information is gathered in advance and in a timely manner so as not to result in significant delays.

If you have any questions, please feel free to contact me at (415) 947-4183 or Deschambault.lynda@epa.gov.

Best Regards,

Lynda Deschambault

Environmental Scientist

USEPA Region 09

(415) 947-4183

Please be advised I may have limited access to email , therefore please be patient with any communication delays.

From: Lombardi, Marc [<mailto:Marc.Lombardi@amecfw.com>]

Sent: Thursday, February 09, 2017 3:35 PM

To: Deschambault, Lynda <Deschambault.Lynda@epa.gov>

Cc: Brown, Anthony R (RM) <anthony.brown@bp.com>; Riley, Gary <riley.gary@epa.gov>; Hillenbrand, John <Hillenbrand.John@epa.gov>; DCarey@waterboards.ca.gov; Block, Nathan <Nathan.Block@bp.com>; Cohen, Adam <Adam.Cohen@dgsllaw.com>; Sandy Riese <sriese@ensci-inc.com>; Weber, Craig L <Craig.Weber@amecfw.com>; Grant Ohland - (gohland@ohlandhydrogeo.com) <gohland@ohlandhydrogeo.com>; Dave McCarthy <dave.mccarthy@copperenv.com>; Koger, Cory S SPK <Cory.S.Koger@usace.army.mil>; 'Greg Reller' <gr@burlesonconsulting.com>; Michelle Hochrein (michelle.hochrein@washoetribe.us) <michelle.hochrein@washoetribe.us>; Fred E. Kirschner

(fredk@aeseinc.com) <fredk@aeseinc.com>; Jefferson, Jill <Jill.Jefferson@amecfw.com>; Andrews, Andy <Andy.Andrews@amecfw.com>; Starr, Robert <Robert.Starr@amecfw.com>; Lambeth, Gregory <Gregory.Lambeth@amecfw.com>

Subject: Leviathan Mine - Response to U.S. EPA Comments on Focused Feasibility Study Geotechnical Evaluation Task Sampling and Analysis Plan

Lynda,

On behalf of Atlantic Richfield, Amec Foster Wheeler is submitting the attached responses to U.S. EPA comments dated July 8, 2016, regarding the draft Focused Feasibility Study Geotechnical Evaluation Task Sampling and Analysis Plan, dated March 31, 2016, for the Leviathan Mine Site in Alpine County, California.

Should you have any other questions or comments please contact Tony Brown at (714) 228-6770 or anthony.brown@bp.com.

Thanks,

Marc

From: Deschambault, Lynda

Sent: Tuesday, January 31, 2017 10:05 AM

To: Brown, Anthony R (RM) <anthony.brown@bp.com>

Cc: Black, Ned <Black.Ned@epa.gov>; Koger, Cory S SPK <Cory.S.Koger@usace.army.mil>;

Darrel Cruz 2 <Darrel.Cruz@washoetribe.us>; David Friedman <dfriedman@ndep.nv.gov>;

DCarey@waterboards.ca.gov; Fred E. Kirschner (fredk@aeseinc.com) <fredk@aeseinc.com>;

'Greg Reller' <gr@burlesonconsulting.com>; Wirschafter, Joshua

<Wirschafter.Joshua@epa.gov>; Ken Maas <kmaas@fs.fed.us>; Michelle Hochrein

(michelle.hochrein@washoetribe.us) <michelle.hochrein@washoetribe.us>; Patty Cubanski

<pc@burlesonconsulting.com>; Sanchez, Yolanda <Sanchez.Yolanda@epa.gov>; Serda,

Sophia <Serda.Sophia@epa.gov>; Shaffer, Caleb <Shaffer.Caleb@epa.gov>; Steve Hampton

<Steve.Hampton@wildlife.ca.gov>; Thomas Maurer <thomas_maurer@fws.gov>; Toby McBride

<toby_mcbride@fws.gov>; Hillenbrand, John <Hillenbrand.John@epa.gov>; Barton, Dana

<Barton.Dana@epa.gov>; Cohen, Adam <Adam.Cohen@dgslaw.com>; Sandy Riese

(sriese@ensci-inc.com) <sriese@ensci-inc.com>; Johnson, Brian S

<Brian.S.Johnson@bp.com>; 'Halsey, Ronald H' <ronald.halsey@bp.com>; Moore, Terry J

<Terry.Moore@bp.com>; Nathan.Block@bp.com; Jefferson, Jill <Jill.Jefferson@amecfw.com>;

Grant Ohland - (gohland@ohlandhydrogeo.com) <gohland@ohlandhydrogeo.com>; Weber,

Craig L <Craig.Weber@amecfw.com>; Starr, Robert <Robert.Starr@amecfw.com>; Lambeth, Gregory <Gregory.Lambeth@amecfw.com>; Dana Barton <Barton.Dana@epa.gov>; Lombardi, Marc (marc.lombardi@amecfw.com) <marc.lombardi@amecfw.com>
Subject: RE: Leviathan Mine - FFS Geotechnical Evaluation TSAP

Dear Mr. Brown.

On July 8, 2016 3:03 Email and attachment (see attached), EPA requested that ARC:

- ***“Please implement the field tasks identified in this TSAP and provide a point by point Response to Comments (RTC) and a final TSAP with the recommended changes”.*** EPA understands and ARC notes that EPA did not clearly specify the usual 30 days for when the RTC is due. Certainly, six months or 180 days is a good and reasonable turnaround time. EPA believes that thirty days from the date of our reminder, or January 28, 2017 is also a reasonable request. When can EPA expect to receive the requested RTC to our 19 page July 8, 2016 comment letter? And a revised and updated workplan? As noted in the introductory comment: ***“G1: Incomplete: The Geotechnical work plan is incomplete. It does not follow the tasks identified in the RI SOW attached to the June 2008 UAO. Nor does the work plan meet the objectives identified in the PWP and Programmatic DQOs.”***
- Further, ***“The work outlined in this TSAP should be completed during the 2016 field season. EPA requests ARC provide a report to EPA within 90 days of the field work completion. As part of that submittal, please address all items in Attachments A, B and C. EPA notes that additional geotechnical investigations will likely be necessary to complete the FS.”*** EPA appreciates the verbal updates and presentations. We look forward to the requested formal written report. It is our understanding that the field mapping was completed November 8, 2016, and review of core completed December 8, 2016. We now look forward to a full report that includes that data, to be submitted March 8, 2017; including but not limited to all items outlined in Attachments A, B, and C. In that report, please also provide an assessment and the recommended additional geotechnical investigations to be completed during the 2017 field season As noted: ***“EPA requests that ARC provide a full and complete workplan for geotechnical investigations to assess the stability of pit high walls, steep slopes on mine waste, landslides, and existing infrastructure such as the Leviathan Mine Road and Aspen Seep Bioreactor, (the TSAP defers such investigations to future efforts), and to complete remedial design. The scope of the geotechnical investigation should be expanded to adequately support the feasibility study by addressing the data gaps identified in the Geotechnical WP/EE and to meet the requirements of the RI SOW”***

Best Regards,

Lynda Deschambault

Environmental Scientist

USEPA Region 09

(415) 947-4183

Please be advised I may have limited access to email , therefore please be patient with any communication delays.

From: Lombardi, Marc [<mailto:Marc.Lombardi@amecfw.com>]
Sent: Tuesday, January 31, 2017 7:16 AM
To: Deschambault, Lynda <Deschambault.Lynda@epa.gov>
Cc: Brown, Anthony R (RM) <anthony.brown@bp.com>; Black, Ned <Black.Ned@epa.gov>; Koger, Cory S SPK <Cory.S.Koger@usace.army.mil>; Darrel Cruz 2 <Darrel.Cruz@washoetribe.us>; David Friedman <dfriedman@ndep.nv.gov>; DCarey@waterboards.ca.gov; Fred E. Kirschner (fredk@aeseinc.com) <fredk@aeseinc.com>; 'Greg Reller' <gr@burlesonconsulting.com>; Wirschafter, Joshua <Wirschafter.Joshua@epa.gov>; Ken Maas <kmaas@fs.fed.us>; Michelle Hochrein (michelle.hochrein@washoetribe.us) <michelle.hochrein@washoetribe.us>; Patty Cubanski <pc@burlesonconsulting.com>; Sanchez, Yolanda <Sanchez.Yolanda@epa.gov>; Serda, Sophia <Serda.Sophia@epa.gov>; Shaffer, Caleb <Shaffer.Caleb@epa.gov>; Steve Hampton <Steve.Hampton@wildlife.ca.gov>; Thomas Maurer <thomas_maurer@fws.gov>; Toby McBride <toby_mcbride@fws.gov>; Hillenbrand, John <Hillenbrand.John@epa.gov>; Barton, Dana <Barton.Dana@epa.gov>; Cohen, Adam <Adam.Cohen@dgslaw.com>; Sandy Riese (sriese@ensci-inc.com) <sriese@ensci-inc.com>; Johnson, Brian S <Brian.S.Johnson@bp.com>; 'Halsey, Ronald H' <ronald.halsey@bp.com>; Moore, Terry J <Terry.Moore@bp.com>; Nathan.Block@bp.com; Jefferson, Jill <Jill.Jefferson@amecfw.com>; Grant Ohland - (gohland@ohlandhydrogeo.com) <gohland@ohlandhydrogeo.com>; Weber, Craig L <Craig.Weber@amecfw.com>; Starr, Robert <Robert.Starr@amecfw.com>; Lambeth, Gregory <Gregory.Lambeth@amecfw.com>
Subject: RE: Leviathan Mine - FFS Geotechnical Evaluation TSAP

Lynda,

On behalf of Atlantic Richfield Company, Amec Foster Wheeler is responding to your email dated December 29, 2016, regarding our response to U.S. EPA comments on the Geotechnical Evaluation TSAP and requesting a 90-day field investigation report. U.S. EPA's comment letter dated July 8, 2016, on the Geotechnical Evaluation TSAP did not specify a requested time frame; thus, we do not consider this "past due work." Because Atlantic Richfield received your email on December 29th during the holiday period when many staff members were away, we have not had sufficient time for completion of our response and internal review by January 29, 2016, as requested. Atlantic Richfield plans to submit our response to U.S. EPA comments on February 6, 2017 along with plans for completion of planned geotechnical investigations in 2017. This submittal date will not affect the timing of any field work planned for 2017.

Atlantic Richfield provided the U.S. EPA a status update on the geotechnical evaluation field work completed in 2016 during our meeting on December 13, 2016. As indicated during that meeting, all of the planned geotechnical investigation for 2016 was completed except for the rock coring, televiwer survey, and inclinometer installation in borehole GB-01 since we had to suspend drilling activities on October 20, 2016, because of the onset of winter conditions. Our geotechnical engineers continued to implement the scope of work described in the TSAP by conducting field mapping until November 8, 2016, and review of core from RI borings (kept in our offsite storage) drilled across the site, which was not completed until December 8, 2016. Thus, the requested 90-day field report would have been due on March 8, not January 28 as indicated in your email of December 29, 2016. Atlantic Richfield provided a similar update to the U.S. EPA during our meeting with U.S. EPA management on January 17, 2017 and the Annual Technical Summary Meeting on January 26, 2017.

However, as you know, the need for interim deliverables such as the 90-day field report outlined in your email request of December 29, 2016, were discussed during our management meeting in San Francisco on January 17, 2017. Following the meeting, we understand additional dialogue has occurred between Atlantic Richfield and U.S. EPA management that will further influence the interim deliverables yet to be prepared and the associated schedule for submittal. As a result, we recommend that the need for the 90-day field report be re-evaluated after Atlantic Richfield and U.S. EPA agree on the path forward for resolution of various RI/FS scheduling and reporting issues.

If you have any questions or comments please contact Tony Brown at (714) 228-6770 or anthony.brown@bp.com<<mailto:anthony.brown@bp.com>>.

Thanks,

Marc

Marc R. Lombardi, CEM, PG

Principal Geologist / Office Manager, Environment & Infrastructure Americas, Amec Foster Wheeler

10940 White Rock Road, Suite 190, Rancho Cordova, CA 95670, USA

D (916) 853-8903 M (916) 302-6326

marc.lombardi@amecfw.com amecfw.com

From: Deschambault, Lynda [<mailto:Deschambault.Lynda@epa.gov>]

Sent: Monday, January 30, 2017 11:22 AM

To: Brown, Anthony R (RM)

Cc: des; Lombardi, Marc; Black, Ned; Cory Koger; Darrel Cruz 1; Darrel Cruz 2; David Friedman; Doug Carey; Fred K; Greg Reller; Wirtschafter, Joshua; Ken Maas; Lynelle Hartway; Patty Cubanski; Sanchez, Yolanda; Serda, Sophia; Shaffer, Caleb; Steve Hampton; Thomas Maurer; Toby McBride; Hillenbrand, John; Barton, Dana

Subject: RE: Leviathan Mine - FFS Geotechnical Evaluation TSAP

Dear Mr. Brown:

I am not sure I've seen your response to my December 29, 2016 email, regarding the past due work?

From: Deschambault, Lynda

Sent: Thursday, December 29, 2016 4:32 PM

To: 'Brown, Anthony R (RM)' <anthony.brown@bp.com>

Cc: des; Lombardi, Marc; Black, Ned; Cory Koger; Darrel Cruz 1; Darrel Cruz 2; David Friedman; Doug Carey; Fred K; Greg Reller; Wirtschafter, Joshua <Wirtschafter.Joshua@epa.gov>; Ken Maas; Lynelle Hartway; Patty Cubanski; Sanchez, Yolanda; Serda, Sophia; Shaffer, Caleb; Steve Hampton; Thomas Maurer; Toby McBride; Hillenbrand, John <Hillenbrand.John@epa.gov>

Subject: Fw: Leviathan Mine - FFS Geotechnical Evaluation TSAP

Our records indicate that ARC response to this remains outstanding since our EPA

letter of nearly 6 months, dated July 8, 2016.

Please provide the response to comments within 30 days or by January 29th.

Further, it isn't clear that the work outlined was completed during the 2016 field season.

As requested EPA anticipates a report to EPA within 90 days of the field work completion or January 29, 2017.

As noted, EPA expects that additional geotechnical investigations will likely be necessary to complete the FS.

Therefore, please also include a plan for work to be completed during the 2017 field season.

thank you for your attention to this matter.

Lynda

Lynda Deschambault

From: Deschambault, Lynda
Sent: Friday, July 8, 2016 3:03 PM
To: Brown, Anthony R (RM)
Cc: Lombardi, Marc; Black, Ned; Bruck, Glenn (Separated 5/28/16); Cory Koger; Darrel Cruz 1; Darrel Cruz 2; David Friedman; Doug Carey; Fred K; Greg Reller; Joshua Wirtschafter (Wirtschafter.Joshua@epa.gov); Ken Maas; Lynelle Hartway; Patty Cubanski; Sanchez, Yolanda; Serda, Sophia; Shaffer, Caleb; Steve Hampton; Thomas Maurer; Toby McBride
Subject: FW: Leviathan Mine - FFS Geotechnical Evaluation TSAP

Dear Mr. Brown:

The U.S. Environmental Protection Agency (EPA) has completed its review of the Focused Feasibility Study Geotechnical Evaluation Task Sampling and Analysis Plan, Leviathan Mine Site, Alpine County, California, Leviathan Mine Site, Alpine County, California, Dated March 31, 2016. This work was submitted to EPA pursuant to Administrative Order for Remedial Investigation and Feasibility Study, Leviathan Mine, Alpine County, California (CERCLA Docket No. 2008-18, June 23, 2008).

Please implement the field tasks identified in this TSAP and provide a point by point Response to Comments (RTC) and a final TSAP with the recommended changes. The work outlined in this TSAP should be completed during the 2016 field season. EPA requests ARC provide a report to EPA within 90 days of the field work completion. As part of that submittal, please address all items in Attachments A, B and C. EPA notes that additional geotechnical investigations will likely be necessary to complete the FS.

If you have any questions, please feel free to contact me at (415) 947-4183 or Deschambault.lynda@epa.gov.

Best Regards,

Lynda Deschambault
Environmental Scientist
USEPA Region 09
(415) 947-4183

Please be advised I may have limited access to email , therefore please be patient with any communication delays.

From: Lombardi, Marc [<mailto:marc.lombardi@amecfw.com>]
Sent: Thursday, March 31, 2016 8:38 PM
To: Lynda Deschambault (deschambault.lynda@epa.gov) <deschambault.lynda@epa.gov>
Cc: Brown, Anthony R (RM) <anthony.brown@bp.com>; Gary Riley (riley.gary@epa.gov) <riley.gary@epa.gov>; Hillenbrand, John <Hillenbrand.John@epa.gov>; DCarey@waterboards.ca.gov;
Block, Nathan <Nathan.Block@bp.com>; Cohen, Adam <Adam.Cohen@dgslaw.com>; Sandy Riese <sriese@ensci-inc.com>; Grant Ohland - (gohland@ohlandhydrogeo.com) <gohland@ohlandhydrogeo.com>; Dave McCarthy <dave.mccarthy@copperenv.com>; Cory Koger <Cory.S.Koger@usace.army.mil>; Greg Reller <gr@burlesonconsulting.com>; Lynelle K. Hartway (Lynelle.Hartway@washoetribe.us) <Lynelle.Hartway@washoetribe.us>; Fred E. Kirschner (fredk@aeseinc.com) <fredk@aeseinc.com>; Jefferson, Jill <jill.jefferson@amecfw.com>; Parrish, Kent <kent.parrish@amecfw.com>; Lombardi, Lynda <lynda.lombardi@amecfw.com>; Weber, Craig L <craig.weber@amecfw.com>; Starr, Robert <robert.starr@amecfw.com>; Morley, Matt <matt.morley@amecfw.com>; Andrews, Andy <andy.andrews@amecfw.com>; Ken Maas <kmaas@fs.fed.us>; Jones, Britt <britt.jones@amecfw.com>
Subject: Leviathan Mine - FFS Geotechnical Evaluation TSAP

Lynda,

On behalf of Atlantic Richfield, Amec Foster Wheeler is submitting the draft Focus Feasibility Study Geotechnical Evaluation Task Sampling and Analysis Plan for the Leviathan Mine Site in Alpine County, California. Hardcopy to follow.

This document is available for immediate download on the Leviathan Mine SharePoint Site via the following hyperlinks:

Due to the large file size, and varying download speeds of the individual SharePoint Site users, we have posted this document to the SharePoint Site in two different ways:

- a) For those with fast internet connections, we have posted the file as one single PDF document. This document is in the file folder labeled "Large File Version" at the end of the file folder name.
- b) For those with slower connections, we have segmented the document into file sizes of approximately 15MB or less. This version of the document is in the file folder labeled "Multiple Small File Version."

This notification is to inform you of folders/documents stored on this

site<http://amext.amec.com/sites/p_0013091150>. Click here to directly access the

folder<http://amext.amec.com/sites/p_0013091150/Public%20Documents/FFS%20Geotechnical%20Evaluation%20TSAP%20Large%20File%20Version>

where these folders/documents are stored. Click on the links below to access each folder/document individually:

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FFS Geotechnical Evaluation TSAP_160331 - Large File Version

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Version<http://amext.amec.com/sites/p_0013091150/Public%20Documents/FFS%20Geotechnical%20Evaluation%20TSAP%20Large%20File%20Version>

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FFS Geotechnical Evaluation TSAP_160331 - Multiple Small File

Version<http://amext.amec.com/sites/p_0013091150/Public%20Documents/FFS%20Geotechnical%20Evaluation%20TSAP%20Multiple%20Small%20File%20Version>

Please let me know if you have any issues accessing the SharePoint Site.

Should you have any questions or comments please contact Tony Brown at (714) 228-6770 or anthony.brown@bp.com<<mailto:anthony.brown@bp.com>>.

Thanks,
Marc

Marc R. Lombardi, CEM, PG

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